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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/520,303	07/02/2012	Qingshan Zhang	LUTZ 201488US01	4600

48116 7590 04/05/2017  
FAY SHARPE/LUCENT  
1228 Euclid Avenue, 5th Floor  
The Halle Building  
Cleveland, OH 44115-1843

EXAMINER
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LAMONT, BENJAMIN S

ART UNIT	PAPER NUMBER
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2461

NOTIFICATION DATE	DELIVERY MODE
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04/05/2017

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* QINGSHAN ZHANG,  
SONGWEI MA, and GANG LIU<sup>1</sup>

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Appeal 2016-000387  
Application 13/520,303  
Technology Center 2400

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Before JOSEPH L. DIXON, JOHNNY A. KUMAR, and  
TERRENCE W. McMILLIN, *Administrative Patent Judges*.

KUMAR, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's  
Final Rejection of claims 1–12 and 14. We have jurisdiction under  
35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> Appellants identify Alcatel Lucent as the real party in interest (App. Br. 1).

*Exemplary Claim*

Claims 1 and 6 are illustrative of the invention and read as follows:

1. A method for providing an inter-domain service, comprising:

subscribing, via a user equipment agent, to a service provided by at least one domain other than the domain to which the user equipment agent belongs;

acquiring, via the user equipment agent, information for accessing the subscribed service from the domain to which the user equipment agent belongs;

accessing, via the user equipment agent, the subscribed service through the at least one other domain, directly based on the acquired information, without going through the domain to which the user equipment agent belongs,

wherein the domain to which the user equipment agent belongs is a mobile network domain and the other domain is a fixed network domain, and

wherein user information in the mobile network is hidden from the fixed network.

6. An apparatus for providing an inter-domain service, comprising:

a service subscription unit for subscribing a service provided by at least one domain other than the domain to which the apparatus belongs,

wherein the service subscription unit is included in an Operation Support System (OSS);

an information acquisition unit for acquiring information for accessing the service from the domain to which the apparatus belongs; and

a service accessing unit for accessing the subscribed service through said at least one other domain directly, based on the acquired information, without going through the domain to which the apparatus belongs.

*The Rejections*

Claims 6–12 are rejected under 35 U.S.C. § 112(b) or 35 U.S.C. § 112 (pre-AIA), second paragraph, as being indefinite. Final Act. 4–6.

Claims 1, 3, 4, and 14 are rejected under pre-AIA 35 U.S.C. § 102(e) as being anticipated by Kant.<sup>2</sup> Final Act. 6–10.

Claim 2 is rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Kant in view of Melaku.<sup>3</sup> Final Act. 11.

Claim 5 is rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Kant in view of Ansari.<sup>4</sup> Final Act. 12.

Claims 6, 8, 9, and 11 are rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Kant in view of Fijolek.<sup>5</sup> Final Act. 12–15.

Claim 7 is rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Kant in view of Fijolek and further in view of Melaku. Final Act. 15–16.

Claim 10 and 12 are rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Kant in view of Fijolek and further in view of Ansari. Final Act. 17.

ANALYSIS

*The § 112, 2nd paragraph rejection*

The Examiner rejected claims 6–12 for failing to comply with § 112, second paragraph. The Examiner finds:

The following claim limitations have been interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth

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<sup>2</sup> U.S. Patent App. Pub. No. 2010/0027533 A1 (Feb. 4, 2010).

<sup>3</sup> U.S. Patent App. Pub. No. 2003/0074443 A1 (Apr. 17, 2003).

<sup>4</sup> U.S. Patent App. Pub. No. 2010/0202450 A1 (Aug. 12, 2010).

<sup>5</sup> U.S. Patent No. 7,107,326 B1 (Sept. 12, 2006).

paragraph: service subscription unit, information acquisition unit, service accessing unit, service subscription providing unit, and information providing unit. They are interpreted as means-plus-function limitations because they use the generic placeholder “unit” coupled with functional language without reciting sufficient structure to achieve the function. Furthermore, the generic placeholder is not preceded by a structural modifier.

However, the specification fails to disclose the corresponding structure of **each** means-plus-function limitation cited above.

For example, the specification teaches a “service subscription unit” in Fig. 3 of the specification, but fails to provide an algorithm, flowchart, code, or structure capable of performing the function of “subscribing to a service provided by at least one other domain from a domain it belongs to” (lines 2-3 of claim 6). In paragraph 73 of the pre-grant publication, the specification reads “the service subscription unit may acquire introduction information on related IPTV services from the mobile network, and provide the information to the user, an as to subscribe IPTV service(s) in accordance with preferences of users”. Paragraph 73 does not provide the structure of how to subscribe to a service in another domain (i.e. the function of the service subscription unit). Instead, it merely provides additional functionality of the service subscription unit.

Similarly, there is a lack of structure provided for information acquisition unit, service accessing unit, service subscription providing unit, and information providing unit.

Final Act. 4–5.

The Appellants contend:

The terms service subscription unit, information acquisition unit, service accessing unit, service subscription providing unit, and information providing unit would be interpreted by one of ordinary skill in the art as components that may be implemented using processors, programmed computers, or the like (software implemented by hardware). . . .

. . . One of ordinary skill in the art would understand that hardware is required to perform the functionality recited in claims 6-10 and interpret claims 6-10 to sufficiently describe the structure required to carry out such functionality. Such language does not constitute means-plus-function language to be fleshed out through reference to the disclosure, but instead indicates with specificity physical elements capable of manipulating and transmitting data. Thus, sufficient structure exists and the claims do not invoke 35 U.S.C. §112, sixth paragraph.

App. Br. 11–12.

In the present case, as an initial matter of claim construction, we agree with the Examiner that the various labeled “unit[s]” recited multiple times in apparatus claim 6 are “nonce” words, under a broad but reasonable interpretation. Our reviewing court guides:

The standard is whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure. *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d [1580,] 1583 [(Fed. Cir. 1996)]. When a claim term lacks the word “means,” the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to “recite sufficiently definite structure” or else recites “function without reciting sufficient structure for performing that function.” *Watts v. XL Systems, Inc.*, 232 F.3d [877,] 880 [(Fed. Cir. 2000)].

*Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015).

Here, Appellants appear to have replaced the term “means for” with the “nonce” word “unit . . . configured to [perform function],” thereby connoting a generic “black box” for performing the recited functions. Therefore, a question arises as to whether Appellants have established in the Specification (or by other evidence entered into record) that the recited

labeled “units” for performing the various functions recited in apparatus claim 6 would have been understood by persons of ordinary skill in the art to have a *sufficiently definite meaning as the name for a specific structure capable of performing the intended functions.*

Regarding apparatus claims generally, our reviewing court guides the patentability of an apparatus claim “depends on the claimed structure, not on the use or purpose of that structure.” *Catalina Marketing Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 809 (Fed. Cir. 2002). For computer-implemented inventions, our reviewing court

has consistently required that the structure disclosed in the specification be more than simply a general purpose computer or microprocessor. *E.g., Aristocrat Techs. Austl. Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008) (citing *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339 (Fed. Cir. 1999)). We require that the specification disclose an algorithm for performing the claimed function. *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1367 (Fed. Cir. 2008). The algorithm may be expressed as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure. *Noah [Sys., Inc. v. Intuit Inc.]*, 675 F.3d [1302,] 1312 [(Fed. Cir. 2012)] (citing *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008)).

*Williamson*, 792 F.3d at 1352.

Appellants’ Specification fails to describe sufficient *structure* corresponding to the contested “nonce” words, which each recite a (labeled) *unit configured to perform a function*, and thus we agree with the Examiner that it should be considered as means-plus-function claim terms under pre-AIA § 112, sixth paragraph, such that claims 6–12 are indefinite under 35 U.S.C. § 112, second paragraph. Because we find there is no structure in the Specification corresponding to the means-plus-function limitation in the

claims, the claims are invalid as indefinite. *See Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1378–79 (Fed. Cir. 1999) (citing *In re Donaldson*, 16 F.3d 1189, 1195 (Fed. Cir. 1994) (en banc)). “Structure disclosed in the specification qualifies as ‘corresponding structure’ if the intrinsic evidence clearly links or associates that structure to the function recited in the claim.” *Williamson*, 792 F.3d at 1352 (citing *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997)). “[T]he fact that one of skill in the art could program a computer to perform the recited functions cannot create structure where none otherwise is disclosed.” *Williamson*, 792 F.3d at 1351 (citing *Function Media, L.L.C. v. Google, Inc.*, 708 F.3d 1310, 1319 (Fed. Cir. 2013)).

*The § 102 rejection*

Claims 1, 3, 4, and 14 are rejected under § 102(e) over Kant. Appellants contend that Kant does not disclose “wherein user information in the mobile network is hidden from the fixed network,” as recited in claim 1. App. Br. 6–7.

The Examiner has provided a comprehensive response on pages 2 through 4 of the Answer. We have reviewed this response and concur with the Examiner’s findings and conclusions. We adopt as our own (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken and (2) the reasons set forth by the Examiner in the Examiner’s Answer in response to Appellants’ Appeal Brief. Ans. 2–4.

In the Reply Brief, the Appellant contends:

The Specification of the present application mentions hiding twice (paragraphs 78 and 85 of Published Application). These sections of the Specification read on the manner in which information in a mobile network is hidden from a fixed



network. A review of these sections of the Specification along with the claims, as is the normal course of action when reading an application, would not lead to one of ordinary skill in the art improperly reading portions of the Specification into the claims but would instead result in a properly informed reader, capable of judging for himself whether the application was novel in light of the current state of the art.

Reply Br. 3.

We decline Appellants' invitation to read limitations from the Specification into the claims. "During prosecution . . . the PTO gives claims their 'broadest reasonable interpretation.'" *In re Bigio*, 381 F.3d 1320, 1324 (Fed. Cir. 2004) (quoting *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000)). "Moreover, limitations are not to be read into the claims from the specification." *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993) (citing *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989)).

*The § 103 rejections*

Regarding claims 6 and 11, although Appellants raise additional arguments for patentability (App. Br. 9–10), we find that the Examiner has rebutted each and every one of those arguments supported by sufficient evidence. Ans. 4–5. Therefore, we adopt the Examiner's findings and underlying reasoning, which are incorporated herein by reference.

DECISION

The Examiner's rejections of claims 1–12 and 14 are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED